

REMARKS

Reconsideration of this application, as amended, is respectfully requested.

Claims 1-15 are pending. Claims 1-15 stand rejected.

Claims 1-3, 11-15 have been amended. No claims have been canceled. No claims have been added. Support for the amendments is found in the specification, the drawings, and in the claims as originally filed. Applicants submit that the amendments do not add new matter.

Rejections Under 35 U.S.C. § 102(e)

Claims 1-15 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,578,069 B1 of Hopmann et al. ("Hopmann"). Applicant reserves the right to show that Hopmann is not prior art.

Hopmann discloses a technique allowing clients and servers in a computer network using World Wide Web Distributed Authoring and Versioning (WebDAV) protocol identify a specific version of a specific resource using a resource tag. Hopmann discloses

In FIG. 2, systems that are not integral parts of network 10 are illustrated by clients 20, 22, and 24. Clients 20, 22, and 24 each have a local store or cache from which resources can be uploaded to a server on network 10, and to which resources can be downloaded to a server on network 10. A client is intended to be a program operating on a data processing mechanism such as a personal computer (PC), where the PC can alternatively be disconnected from and reconnected to network 10. As an example, client 20 may represent a mobile system such as a laptop that may connect to various points in the network depending on where the laptop is located when it is accessing the network.

(Hopmann, col.7, lines 16-33) (emphasis added)

More specifically, Hopmann discloses

A basic principle of the present invention is that every resource has a resource tag associated with it. As such, the resource tag identifies not just a specific resource but also a specific version of a specific resource. Stated otherwise, a resource tag only identifies one version of one resource at one moment in time. In general, a resource tag can be a token generated by the server that represents the state of a DAV resource that is processed in the WebDAV protocol. The value of this property is a URI. Every replicated resource has a resource tag associated with it that reflects the current state of that particular resource. Every time a resource's properties or contents change the inventive resource tag associated with the particular resource is updated by a server on the network.

Thus, when a client uploads to a server a resource tag and its corresponding particular version of the particular resource that is stored at the server, the server can "overturn the resource tag". Such an overturning of the resource tag in effect means that the server also stores the uploaded resource tag. By allowing both server and client in this scenario to store the same resource tag, the client does not have to re-download the same resource that it just uploaded to the sever, thus minimizing the network traffic in terms of both time and transreceived data.

(Hopmann, col.7 line 57 to col.8, line 13) (emphasis added)

Significantly, Hopmann discloses

In application, a client uploads a request to a server that specifies the resource tag of a particular version of a particular resource that the client wants to download the properties and/or the content thereof. The server, after verifying that it stores a copy of the requested version of the requested resource, then proceeds to download to the client the requested the properties and/or the content of the requested resource.

(Hopmann, col. 8, lines 24- 31) (emphasis added)

Thus, Hopmann merely discloses a computer network comprising a plurality of servers 10 and clients 20, 22, and 24 that can receive the specific version of a specific resource with a unique resource identification tag. Hopmann, however, fails to disclose network computer ("NC") clients, which load and initialize an operating system from a network i.e. are booted from a network. Hopmann also fails to disclose one of the network computer clients that causes other NC clients to load and initialize a second operating system software that is configured differently than a first operating system software by replacing a first set of one or more system volumes maintained at a NC server and containing the first operating system software with a second set of one or more system volumes maintained at the NC server and containing second operating system software, as recited in amended claim 1:

A method comprising a first network computer (NC) client of a plurality of NC clients causing other of the plurality of NC clients that are subsequently booted from a network to receive a second operating system software that is configured differently than a first operating system software by replacing a first set of one or more system volumes maintained at a NC server containing the first operating system software with a second set of one or more system volumes maintained at the NC server containing second operating system software.

(emphasis added)

Because Hopmann does not disclose all limitations of amended claim 1, applicants respectfully submit that claim 1, as amended, is not anticipated by Hopmann under 35 U.S.C. §102 (e).

Amended claim 2 reads as follows:

A method comprising:

a network computer (NC) client causing a working copy of one or more system volumes on a NC server to be created by copying the one or more system volumes to a storage area separate from the location of the one or more system volumes, the one or more system volumes containing operating system software that is utilized by each of the plurality of NC clients; and

the NC client causing each of a plurality of NC clients that are subsequently booted from a network to utilize a same single modified operating system by modifying the working copy and replacing the one or more system volumes with the working copy.

(emphasis added)

With respect to amended claim 2, as set forth hereinabove, Hopmann fails to disclose a NC client causing each of a plurality of NC clients that are subsequently booted from a network to utilize a same single modified operating system by modifying the working copy and replacing the one or more system volumes with the working copy.

Because Hopmann does not disclose all limitations of amended claim 2, applicants respectfully submit that claim 2, as amended, is likewise not anticipated by Hopmann under 35 U.S.C. §102 (e).

Amended claim 3 reads as follows:

A method comprising:

a network computer (NC) client booting from a boot image provided by a NC server, the boot image including information identifying the location of one or more system volumes on the NC server, the one or more system volumes containing operating system software;

creating a working copy of the one or more system volumes by copying the one or more system volumes to a storage area separate from the location of the one or more system volumes; and

modifying the operating system software supplied by the NC server to subsequently net-booted NC clients by modifying the working copy and replacing the one or more system volumes with the working copy.

(emphasis added)

As set forth above, Hopmann fails to disclose the limitation of amended claim 3 of modifying the operating system software supplied by the NC server to subsequently net-booted NC clients by modifying the working copy and replacing the one or more system volumes with the working copy.

Therefore applicants respectfully submit that claim 3, as amended, is likewise not anticipated by Hopmann under 35 U.S.C. §102 (e).

Given that dependent claims 4-6, 7-8, and 9-10 depend directly on amended claims 1, 2, and 3 respectively, applicants respectfully submit that claims 4-6, 7-8, and 9-10 are likewise not anticipated by Hopmann under 35 U.S.C. §102 (e).

With respect to amended claim 11 that includes the limitation discussed above of the NC client causing each of those NC clients that are subsequently booted from a network to utilize a modified operating system by modifying the working copy and replacing the one or more system volumes with the working copy, applicants respectfully submit that claim 11, as amended, is likewise not anticipated by Hopmann under 35 U.S.C. §102 (e).

With respect to amended claim 12 that includes the limitation discussed above of a plurality of NC clients that are subsequently booted from a network to utilize the same modified operating system by modifying the working copy by one of the plurality of NC clients and replacing the one or more system volumes with the working copy, applicants respectfully submit that claim 12, as amended, is likewise not anticipated by Hopmann under 35 U.S.C. §102 (e).

With respect to amended claim 13 that includes the limitations discussed above of causing each of a plurality of network computer (NC) clients that are booted from a network to

utilize a single modified operating system by creating and modifying a single working copy, applicants respectfully submit that claim 13, as amended, is likewise not anticipated by Hopmann under 35 U.S.C. §102 (e).

With respect to amended claim 14 that includes the limitations discussed above of a plurality of NC clients, wherein one of the plurality of NC clients is configured to cause each of those of the plurality of NC clients that are subsequently booted from a network to receive a second operating system that is configured differently than a first operating system, applicants respectfully submit that claim 14, as amended, is likewise not anticipated by Hopmann under 35 U.S.C. §102 (e).

With respect to amended claim 15 that includes the limitations discussed above of a NC client means for causing a plurality of NC clients means that are subsequently booted from a network to receive a second operating system software that is configured differently than a first operating system in effect, applicants respectfully submit that claim 13, as amended, is likewise not anticipated by Hopmann under 35 U.S.C. §102 (e).

Rejections Under 35 U.S.C. § 103(a)

Claims 1-15 stand rejected under 35 U.S.C. § 103 as being obvious over U.S. Patent No. 6,578,069 B1 of Hopmann et al. ("Hopmann") in view of U.S. Patent No. 5,742,829 of Davis et al. ("Davis"). Claims 1-15 stand rejected under 35 U.S.C. § 103 as being obvious over U.S. Patent No. 5,483,647 of Yu et al. ("Yu") in view of U.S. Patent No. 6,006,034 of Heath et al. ("Heath").

As set forth above, Hopmann fails to disclose the limitations of amended claim 1 of network computer ("NC") clients that are booted from a network, wherein one of the network computer clients causes other NC clients to load and initialize a second operating system

software that is configured differently than a first operating system software by replacing a first set of one or more system volumes maintained at a NC server and containing the first operating system software with a second set of one or more system volumes maintained at the NC server and containing second operating system software.

Davis discloses an automatic software installation on heterogeneous client computer systems having different operating system types. Davis discloses

The present invention provides for automatically installing software on heterogeneous client computer systems. In a distributed system having heterogeneous computer systems of different natural languages, different operating system types, and/or different processor types, the present invention automatically installs the appropriate edition of software onto client computers. The present invention installs an edition of software appropriate for execution on a particular processor type, with a particular operating system type and in a particular natural language by utilizing commands specific to an operating system type. The present invention automatically installs software in response to the availability of a new version of the software, a change in the operating system of the client computer, a change in the associated natural language of the client computer, or in response to input of the administrator of the distributed system.

(Davis, Abstract) (emphasis added)

More specifically, Davis discloses

In providing software distribution and installation, the centralized management system centralizes the management and installation of application programs on file servers and clients. The software update functionality performed by the centralized management system installs a new version of the software when the current version of the software becomes outdated. The installation of the new version of software is performed on each computer that needs the new version.

(Davis, col. 3, lines 53- 64) (emphasis added)

Significantly, Davis discloses

The preferred embodiment of the present invention can be used to copy software (or programs) that perform functionality related to the centralized management system from the client server to the client and start the programs after copying them. The preferred embodiment performs this functionality either automatically or in response to input of the administrator. The preferred embodiment performs this functionality automatically when the client changes natural languages between logons, when the client changes operating systems between logons or when the version of the software currently loaded on the client becomes outdated. Thus, the preferred embodiment provides the user with the

flexibility of booting up the client under different operating systems or natural languages and the preferred embodiment will automatically utilize the correct edition of the centralized management system software. In addition, the preferred embodiment provides for automatically updating the version of the centralized management system software without the end user being involved. This facilitates the management of client computers.

(Davis, col. 10, lines 23- 42) (emphasis added)

Thus, in contrast to the present disclosure, Davis discloses an installation of a software on a client's computer through the centralized management system, wherein the software is adapted to a particular client's operating system in a heterogeneous computer network. The installation of the software on the client is performed in response to a change in the operating system of this client. Davis, however, fails to disclose network computer ("NC") clients, which load and initialize an operating system from a network i.e. which are booted from a network. Davis also fails to disclose one of the network computer clients that causes other NC clients to load and initialize a second operating system software that is configured differently than a first operating system software by replacing a first set of one or more system volumes maintained at a NC server and containing the first operating system software with a second set of one or more system volumes maintained at the NC server and containing second operating system software, as recited in amended claim 1.

Hence, neither Hopmann, nor Davis discloses, teaches, or suggests the limitations of amended claim 1 of network computer ("NC") clients, which are booted from a network, wherein one of the network computer clients causes other NC clients to load and initialize a second operating system software that is configured differently than a first operating system software by replacing a first set of one or more system volumes maintained at a NC server and containing the first operating system software with a second set of one or more system volumes maintained at the NC server and containing second operating system software.

It is also respectfully submitted that Hopmann does not teach or suggest a combination with Davis and that Davis does not teach or suggest a combination with Hopmann. It would be

impermissible hindsight based on applicants' own disclosure to incorporate the Hopmann's method of identifying a specific version of a specific resource into the Davis's automatic installation of a software on heterogeneous client computers.

Consequently, even if Hopmann and Davis were combined, such a combination would lack the limitation of amended claim 1 of network computer ("NC") clients, which are booted from a network, wherein one of the network computer clients causes other NC clients to load and initialize a second operating system software that is configured differently than a first operating system software by replacing a first set of one or more system volumes maintained at a NC server and containing the first operating system software with a second set of one or more system volumes maintained at the NC server and containing second operating system software.

Therefore, applicants respectfully submit that amended claim 1 is not obvious under 35 U.S.C. § 103 (a) over Hopmann in view of Davis.

With respect to amended claim 2, as discussed above, neither Hopmann, nor Davis discloses, teaches, or suggests the limitation of amended claim 2 of a NC client causing each of a plurality of NC clients that are subsequently booted from a network to utilize a same single modified operating system by modifying the working copy and replacing the one or more system volumes with the working copy.

Consequently, even if Hopmann and Davis were combined, such a combination would lack the limitation of amended claim 2 of a NC client causing each of a plurality of NC clients that are subsequently booted from a network to utilize a same single modified operating system by modifying the working copy and replacing the one or more system volumes with the working copy.

Therefore, applicants respectfully submit that amended claim 2 is not obvious under 35 U.S.C. § 103 (a) over Hopmann in view of Davis.

With respect to amended claim 3, as discussed above, neither Hopmann, nor Davis discloses, teaches, or suggests the limitation of amended claim 3 of modifying the operating system software supplied by the NC server to subsequently net-booted NC clients by modifying the working copy and replacing the one or more system volumes with the working copy.

Consequently, even if Hopmann and Davis were combined, such a combination would lack the limitation of amended claim 3 of modifying the operating system software supplied by the NC server to subsequently net-booted NC clients by modifying the working copy and replacing the one or more system volumes with the working copy.

Therefore, applicants respectfully submit that amended claim 3 is not obvious under 35 U.S.C. § 103 (a) over Hopmann in view of Davis.

Given that dependent claims 4-6, 7-8, and 9-10 depend directly on amended claims 1, 2, and 3 respectively, applicants respectfully submit that claims 4-6, 7-8, and 9-10 are likewise not obvious under 35 U.S.C. § 103 (a) over Hopmann in view of Davis.

With respect to amended claim 11, as discussed above, neither Hopmann, nor Davis discloses, teaches, or suggests the limitation of the NC client causing each of those a plurality of NC clients that are subsequently booted from a network to utilize a modified operating system by modifying the working copy and replacing the one or more system volumes with the working copy.

Therefore applicants respectfully submit that claim 11, as amended, is likewise not obvious under 35 U.S.C. § 103 (a) over Hopmann in view of Davis.

With respect to amended claim 12, as discussed above, neither Hopmann, nor Davis discloses, teaches, or suggests the limitation of a plurality of NC clients that are subsequently booted from a network to utilize the same modified operating system by modifying the working

copy by one of the plurality of NC clients and replacing the one or more system volumes with the working copy.

Therefore applicants respectfully submit that claim 12, as amended, is likewise not obvious under 35 U.S.C. § 103 (a) over Hopmann in view of Davis.

With respect to amended claim 13, as discussed above, neither Hopmann, nor Davis discloses, teaches, or suggests the limitation of causing each of a plurality of network computer (NC) clients that are booted from a network to utilize a single modified operating system by creating and modifying a single working copy.

Therefore applicants respectfully submit that claim 13, as amended, is likewise not obvious under 35 U.S.C. § 103 (a) over Hopmann in view of Davis.

With respect to amended claim 14, as discussed above, neither Hopmann, nor Davis discloses, teaches, or suggests the limitation of a plurality of NC clients, wherein one of the plurality of NC clients is configured to cause each of those of the plurality of NC clients that are subsequently booted from a network to receive a second operating system that is configured differently than a first operating system.

Therefore applicants respectfully submit that claim 14, as amended, is likewise not obvious under 35 U.S.C. § 103 (a) over Hopmann in view of Davis.

With respect to amended claim 15, as discussed above, neither Hopmann, nor Davis discloses, teaches, or suggests the limitation of a NC client means for causing a plurality of NC clients means that are subsequently booted from a network to receive a second operating system software that is configured differently than a first operating system in effect.

Therefore applicants respectfully submit that claim 15, as amended, is likewise not obvious under 35 U.S.C. § 103 (a) over Hopmann in view of Davis.

Yu discloses a system for switching a user application between a proprietary operating system and a non-proprietary UNIX based operating system. More specifically, Yu discloses

When a user application switches from the proprietary operating system to the non-proprietary system, the server is invoked and determines if the terminal device can be physically driven by the multiplexer terminal driver of the non-proprietary based operating system. If the physical conditions are met, the server initiates the physical connection. The server initializes the direct communications path and passes all pertinent connection information from the NTD component to the physical driver to establish communication with the multiline communications controller. Once the physical driver module is activated, the server module logically disconnects the communications path between the NTD [network terminal] driver and the multiplexer driver. User application input/output operations thereafter proceed through the multiplexer physical driver module. When a UNIX connection is terminated, all modified terminal information is passed back to the proprietary operating system for enabling reconnection. The connection and reconnection is performed automatically and is seamless to the user. That is, no login or logout to the UNIX-based operating system is required by the user.

(Yu, col. 2, lines 11-30) (emphasis added)

Thus, Yu merely discloses switching the user application program between a proprietary operating system and a non-proprietary UNIX-based operating system by including a multiplexer physical terminal driver to initiate a physical connection transparent to the user. Yu, unlike the present disclosure, fails to disclose network computer ("NC") clients, which load and initialize an operating system from a network i.e. which are booted from a network. As the Examiner noted, Yu also fails to disclose one of the network computer clients that causes other NC clients to load and initialize a second operating system software that is configured differently than a first operating system software by replacing a first set of one or more system volumes maintained at a NC server and containing the first operating system software with a second set of one or more system volumes maintained at the NC server and containing second operating system software, as recited in amended claim 1.

Heath discloses systems and methods for maintaining application programs on a client computer in a client-server network environment. Significantly, Heath discloses

In the preferred embodiment, the present invention involves maintaining on a server the components of an application program, each having a version identification, and maintaining a catalog of components with the version identifications. The components may include executable codes, library files, parameter files, and data files of the application program. The application program is further maintained at a client. In response to a call to the server from the client, the server is caused to download the catalog to the client and the client compares the version identifications between the components maintained on the server as indicated in the downloaded catalog and the components maintained on the client. The application program on the client is updated by downloading from the server to the client the selected components for which the version identifications do not match. The updated application program is then executed on the client.

(Heath, col. 1, line 63 to col. 2, line 5) (emphasis added)

More specifically, Heath discloses

In another embodiment, the application program on the client is automatically updated by an operating system or by a launcher program executed by a startup command on the client each time the client is booted up. In such an embodiment, the application program is caused to be updated regardless of whether the application program is executed at the client...

(Heath, col.2, line 52 to col. 3, line 6) (emphasis added)

Thus, Heath discloses that an application program on a client computer is updated, in contrast, by downloading the selected components from the server that can be done by an operating system. Heath, however, does not disclose network computer ("NC") clients, which are booted from a network. Heath also fails to disclose one of the network computer clients that causes other NC clients to load and initialize a second operating system software that is configured differently than a first operating system software by replacing a first set of one or more system volumes maintained at a NC server and containing the first operating system software with a second set of one or more system volumes maintained at the NC server and containing second operating system software, as recited in amended claim 1.

Hence, neither Yu, nor Heath discloses, teaches, or suggests the limitations of amended claim 1 of network computer ("NC") clients, which are booted from a network, wherein one of the network computer clients causes other NC clients to load and initialize a second operating

system software that is configured differently than a first operating system software by replacing a first set of one or more system volumes maintained at a NC server and containing the first operating system software with a second set of one or more system volumes maintained at the NC server and containing second operating system software.

It is also respectfully submitted that Yu does not teach or suggest a combination with Heath and that Heath does not teach or suggest a combination with Yu. It would be impermissible hindsight based on applicants' own disclosure to incorporate the Yu's system of switching the user application program between a proprietary operating system and a non-proprietary UNIX based operating system into the Heath's automatic upgrade and maintenance of application programs on a client's computer.

Consequently, even if Yu and Heath were combined, such a combination would lack the limitation of amended claim 1 of network computer ("NC") clients, which are booted from a network, wherein one of the network computer clients causes other NC clients to load and initialize a second operating system software that is configured differently than a first operating system software by replacing a first set of one or more system volumes maintained at a NC server and containing the first operating system software with a second set of one or more system volumes maintained at the NC server and containing second operating system software.

Therefore, applicants respectfully submit that amended claim 1 is not obvious under 35 U.S.C. § 103 (a) over Yu in view of Heath.

With respect to amended claim 2, as discussed above, neither Yu, nor Heath discloses, teaches, or suggests the limitation of amended claim 2 of a NC client causing each of a plurality of NC clients that are subsequently booted from a network to utilize a same single modified operating system by modifying the working copy and replacing the one or more system volumes with the working copy.

Consequently, even if Yu and Heath were combined, such a combination would lack the limitation of amended claim 2 of a NC client causing each of a plurality of NC clients that are subsequently booted from a network to utilize a same single modified operating system by modifying the working copy and replacing the one or more system volumes with the working copy.

Therefore, applicants respectfully submit that amended claim 2 is not obvious under 35 U.S.C. § 103 (a) over Yu in view of Heath.

With respect to amended claim 3, as discussed above, neither Yu, nor Heath discloses, teaches, or suggests the limitation of amended claim 3 of modifying the operating system software supplied by the NC server to subsequently net-booted NC clients by modifying the working copy and replacing the one or more system volumes with the working copy.

Consequently, even if Yu and Heath were combined, such a combination would lack the limitation of amended claim 3 of modifying the operating system software supplied by the NC server to subsequently net-booted NC clients by modifying the working copy and replacing the one or more system volumes with the working copy.

Therefore, applicants respectfully submit that amended claim 3 is not obvious under 35 U.S.C. § 103 (a) over Yu in view of Heath.

Given that dependent claims 4-6, 7-8, and 9-10 depend directly on amended claims 1, 2, and 3 respectively, applicants respectfully submit that claims 4-6, 7-8, and 9-10 are likewise not obvious under 35 U.S.C. § 103 (a) over Yu in view of Heath.

With respect to amended claim 11, as discussed above, neither Yu, nor Heath discloses, teaches, or suggests the limitation of the NC client causing each of those a plurality of NC clients that are subsequently booted from a network to utilize a modified operating system by modifying the working copy and replacing the one or more system volumes with the working copy.

Therefore applicants respectfully submit that claim 11, as amended, is likewise not obvious under 35 U.S.C. § 103 (a) over Yu in view of Heath.

With respect to amended claim 12, as discussed above, neither Yu, nor Heath discloses, teaches, or suggests the limitation of a plurality of NC clients that are subsequently booted from a network to utilize the same modified operating system by modifying the working copy by one of the plurality of NC clients and replacing the one or more system volumes with the working copy.

Therefore applicants respectfully submit that claim 12, as amended, is likewise not obvious under 35 U.S.C. § 103 (a) over Yu in view of Heath.

With respect to amended claim 13, as discussed above, neither Yu, nor Heath discloses, teaches, or suggests the limitation of causing each of a plurality of network computer (NC) clients that are booted from a network to utilize a single modified operating system by creating and modifying a single working copy.

Therefore applicants respectfully submit that claim 13, as amended, is likewise not obvious under 35 U.S.C. § 103 (a) over Yu in view of Heath.

With respect to amended claim 14, as discussed above, neither Yu, nor Heath discloses, teaches, or suggests the limitation of a plurality of NC clients, wherein one of the plurality of NC clients is configured to cause each of those of the plurality of NC clients that are subsequently booted from a network to receive a second operating system that is configured differently than a first operating system.

Therefore applicants respectfully submit that claim 14, as amended, is likewise not obvious under 35 U.S.C. § 103 (a) over Yu in view of Heath.

With respect to amended claim 15, as discussed above, neither Yu, nor Heath discloses, teaches, or suggests the limitation of a NC client means for causing a plurality of NC clients

means that are subsequently booted from a network to receive a second operating system software that is configured differently than a first operating system in effect.

Therefore applicants respectfully submit that claim 15, as amended, is likewise not obvious under 35 U.S.C. § 103 (a) over Yu in view of Heath.

It is respectfully submitted that in view of the amendments and arguments set forth herein, the applicable rejections have been overcome. If there are any additional charges, please charge Deposit Account No. 02-2666 for any fee deficiency that may be due.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

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